BY ROBERT A. LEVINE

The truism that the United States is the world's economic leader is, in fact, true in two ways. The American economy has been growing faster than any other in the western world. What's more, American growth has led – literally pulled – most of the other developed economies and some less-developed ones into prosperity. Notably, America's prosperity-driven demand for imports has set off a mini-boom in continental Europe.

The American economy's success in recent years has rightly been attributed to its leadership in what is widely dubbed the information revolution. But that explanation only leads to another question: What made the United States so attractive to high-tech, New Economy industries, compared to technologically advanced Europe?

Was it wise economic policy? The Clinton Administration, the Federal Reserve and even the Congress deserve some credit – but mainly for not getting in the way of a potent technological wave.

Or was it a flexible economic structure? That gets closer to the core, but doesn't explain why the United States economy is so much more flexible than others – why western Europe has been unable to adapt in equivalent ways.

I would argue that the overwhelming reason for the United States lead is American enterprise, and the sources of that advantage lie deep in geography and history – and in the culture stemming from that history. The Old World may strain to close the enterprise gap, but America's advantage is so fundamental that it is hardly likely to lose the lead soon.

America's strengths do have a downside, though: an inherent vulnerability to income inequality, which creates a litany of social problems Europeans are only too happy to recite. *Schadenfreude* can thus be enjoyed on both sides of the Atlantic. But after one grows weary of feeling superior, real issues intrude. Can Europe win back a share of technological and economic leadership? Can the United States emulate European *egalité* and *fraternité*. And should either try to make such gains at the risk of losing cherished differences?

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GROWTH

The great Austrian-American economist Joseph Schumpeter (1883-1950) contended that growth is impelled by innovations introduced by entrepreneurs. These are special words: innovations are not inventions, while an entrepreneur is not just somebody with the keys to the store. Rather, an innovation is the introduction into the working economic

system of something that makes a difference. It may be an invention in the strict definition, but it may also be a new mode of industrial organization or a change in marketing. To be an innovation it must *do* economically, rather than just *be*. By the same token, an entrepreneur is the individual who takes the risk and gains the profit from innovation. Bill Gates is an entrepreneur. The Xerox executive who complained in a *New York Times* op-ed article that Microsoft is not innovative because it depends on other people's technology is not.

Schumpeter suggested that, beginning with the Industrial Revolution, clusters of innovations have brought about long waves of economic activity. He thought the cycles were on the order of a half century in length, but that is neither certain nor important to his broad insight. A wave begins with a period of strong growth when new technologies or concepts replace the old. Eventually, the new techniques are fully absorbed and the wave turns down. Ordinary business-cycle activity imposed on the growth phase yields relatively mild recessions. But those recessions can be fierce on the down slope of the innovative wave. Think of the Great Depression of the 1930s.

By the time of Schumpeter's death, three long waves had crested and fallen since the Industrial Revolution. The first, at the end of the 18th century and the beginning of the 19th, was associated with the steam engine and the introduction of interchangeable parts in manufacturing. It was followed by the railroad/telegraph revolution in the last half of that century. The third was based on the automobile, the airplane, wireless and movies, with which the 20th century began. World War II marked the beginning of a fourth wave centered on television and other means of mass communication, as well as on new military technologies spurred by the cold war.

In a Shumpeterian reading of events, the current rapid growth of the world economy is the upslope of the most recent of the long waves – one based on computer hardware and software and new means of electronic communication; it probably includes bioengineering, too. This wave, like the last two, has been led by the United States. From 1995 to 1999, the United States GDP grew at an annual average of more than 4 percent, while growth in Western Europe was roughly half that.

The immediate cause of the gap is clear: the United States has invested a lot in the new technologies. In 1999, more than one-third of total investment (excluding housing) in the United States was in information-processing equipment and software, and almost half the increase in investment from 1989 to 1999 was in this sector. Technological research and development in the United States has exceeded that of France, Germany and the United Kingdom combined; on a per capita basis, it has been twice that of France and Germany.

Why the disparity? The answer lies partly in America's size. Sheer size of the domestic market has provided critical mass to encourage and absorb innovations. But the advantages of scale with respect to Europe are plainly diminishing with the integration of the European capital and goods markets. It is becoming increasingly clear that the more important differences are cultural.

Arguably, the single most important factor in American innovative leadership is the emphasis on ambition over security. For many Americans – particularly the most competent – the hope of getting rich is a more compelling incentive than the fear of becoming poor. Contrast that, for example, to France, where the highest ambition for many at the top levels of education and status (as well as the lower ones) is to become a govern-

ment employee.

Nearly as important are American flexibility and social fluidity. These have several crucial manifestations:

Class Mobility. Poor white men – but increasingly also non-whites and non-males – believe they have a chance of moving up. And, in part, the expectation is self-fulfilling.

Anti-racism. This is certainly not the first characteristic that comes to mind when Europeans, or even Americans, think of the United States. Indeed, European intellectuals believe the United States to be the prototypical racist nation, a bastion of prejudice compared to contemporary Europe. Yet while racism persists on both sides of the Atlantic, the United States has been fighting it – and with a surprising degree of success. The payoff in terms of economic growth comes in the form of a higher return on investments in human capital and a more productive labor force.

Immigration. Of more immediate significance for America's lead in the information revolution is that the United States is a nation of immigrants. True, many Americans (like many Europeans) worry not only about the size of immigration flows, but also about the differences of the new immigrants' ways from those of the dominant culture. Nonetheless, the history of the US is one of new groups changing the existing culture, even as they adapted to it. This differs not only from Germany, where citizenship by "right of blood" is giving way only reluctantly to citizenship based on birth on national soil, but even from France, where immigrants were long welcome so long as they assimilated.

The importance of immigration to American leadership of the economic revolutions of the first part of the 20th century is illustrated by the contributions made by first- and second-generation Jewish immigrants, particularly refugees from Hitlerism. Now, disproportionate numbers of Asian immigrants and their offspring have joined the information revolution.

Higher Education. The average quality of post-secondary education in America may be better or worse than European education – it depends on the measurement criteria. What is certain, however, is that colleges and universities in the United States are far more diverse than those elsewhere. Harvard is at least the equal of any university in the world. Meanwhile, public institutions like the California state universities exemplify a large number of very solid mass market institutions with few analogues in Europe.

The diversity of higher education has three implications for American technological leadership. First, it means that a higher percentage of high school graduates gets some sort of post-secondary school education than in comparably affluent nations. Second, the openness and flexibility of higher education attracts immigrants looking for such opportunity. And third, American higher education provides more job-specific training than do the elite institutions of the Old World.

Public Policy

The policies that have most encouraged growth have been noneconomic.

The Anti-Statist State. America's historical ideology is anti-statist. For a combination of reasons – the origins of the Revolution in protest against the English monarchy, the protections granted in uniting 13 very different colonies, the ongoing influence of the frontier – the United States stressed checks and balances and diffusion of power at a time when European states were becoming increasingly centralized. In the last half of the 19th century, American economic development was subject at a crucial time to little control from the federal government –

although it did receive a boost in the form of substantial subsidies for infrastructure. This permitted efficient, market-driven growth in contrast to the top-down planned development of the countries of continental Europe.

Defense Dollars. The cold-war defense budget of the United States, decried for decades for dissipating resources into unproductive uses, in retrospect provided a major source of funding for high technology. Defense spending underwrote both the people and the basic science to keep an increasingly high-tech electronic military machine moving forward, in the process creating a seedbed for the civilian technologies of the new economy. The same might have been true in the Soviet Union, except that none of the other conditions for growth were fulfilled.

Economic policies have also encouraged growth in the United States, though typically growth has only been a secondary goal.

Research Policy. The federal government has encouraged research and development in effective ways. The typical sequence leading to technological change looks something like this: basic research in scientific principles and generic technology > applied research into the uses of the technology for actual products and processes > development of the new products and processes > marketing them.

The last three of the four steps define the innovation process: the costs and risks of applied research, development and marketing are incurred by the entrepreneur in hope of profits to be gained. The rewards for the first step, basic research, however, are spread broadly, with only a small portion likely to accrue to the researcher. For that reason, government, representing the economy as a whole, is an appropriate source of funding.

The United States' system fits that model. In 1996, the economy as a whole spent $30 billion for basic research, $39 billion for applied research, and $116 billion for development. The federal government portion of each went in inverse order: 58 percent of basic research, 36 percent of applied, 26 percent of development, and almost nothing for marketing. And much of the government spending in applied research and development, it should be noted, was related to defense.

The Monopoly Game. The irony of the innovation process is that the lure of big profits gained from having at least a temporary monopoly is the primary incentive for innovation. But once their dominance is achieved, monopolists have incentives to constrain further innovation. The American system, put in place at the end of the 19th century, encourages temporary monopoly through patents but uses flexible antitrust laws to deter innovation-stifling control of markets. During the same period, Europe's key industrial nations promoted monopoly; *kartel*, after all, is a German word.

Laissez-Faire. A corollary of America's broad anti-statist ideology is a bias toward limiting the government's role in the economy. The United States has fewer rules about wages, job security and other employment conditions – not to mention less employment in the public sector and lower taxes – than does most of Europe.

Market-oriented European economists attribute higher European unemployment rates to government-induced labor market rigidities. That is a partial truth. Labor market flexibility matters, but probably makes a smaller contribution to economic leadership in the United States than does a related difference: the United States lets its entrepreneurs decide where to innovate, while European states are inclined to tell them. It is difficult to find a precise English equivalent for the French word *dirigisme*.

Higher Ed. Higher education is encouraged by heavy investment from all levels of government. A century and a half ago, the federal government gave land grants to the states to subsidize new universities. And Washington continues to spend significantly on higher ed through research and scholarships.

THE DOWNSIDE TO LEADERSHIP

The costs of the United States lead in the information revolution and world economic growth have been substantial – substantial enough that an argument can be made that the rapid economic growth of the United States has not been worth the price. The major costs – increasing inequality in income and wealth, and problems fostered by that inequality – are more social than economic. That makes them difficult for economists, who are trained to avoid problems with a subjective dimension, to analyze. But it does not follow that the costs are small.

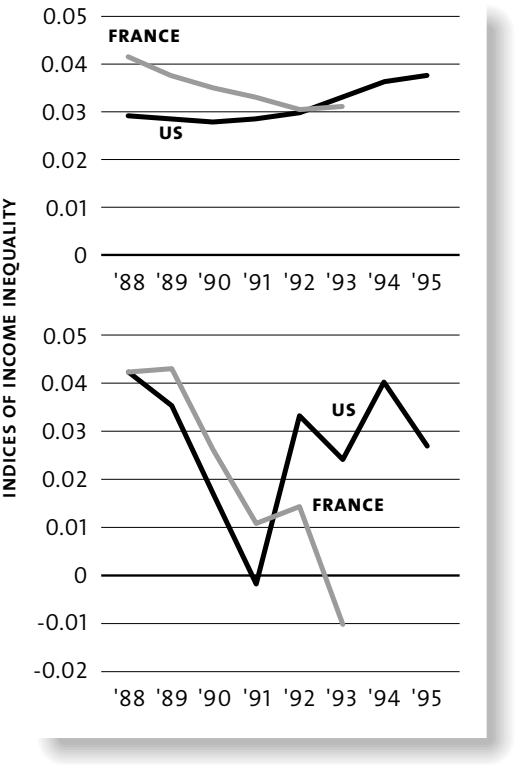
Inequality

Incomes in the United States are less equal than those in Europe and are becoming even more skewed in a way that suggests a strong connection to recent rapid growth. Reliable data on inequality are difficult to come by, but two charts using data from the United States and France suggest what has been happening in recent years.

The charts, presenting indices of income inequality, show a gradual and continuing income equalization in France through 1993, the last year for which data are available. Income inequality in the United States is level for the beginning of the period, but begins to rise starting in 1993, jumping by almost a quarter through 1995; other data suggest that inequality continued to increase through 1999.

Although causation can never be proven, the factors that brought about the spurt of growth seem likely to have at least exacerbated the increased inequality: France's GDP growth slowed as inequality decreased, while American GDP accelerated.

PAYING THE PIPER FOR GROWTH



What seems to have happened in the United States is that innovation made entrepreneurs very rich – as it was supposed to. Those who could contribute to the information revolution gained, while those who could not did not. The lot of the latter group was made even worse since, at the same time as the high-tech advantage of the United States grew, the comparative advantage of other countries in low-tech also grew. Jobs not only for less-skilled Americans but also for those skilled in low-tech industries departed across

the Pacific and the Rio Grande.

The cultural forces that have gone a long way to ensuring American economic leadership have also helped to perpetuate inequality. The weight put on ambition over security, and the fluidity of the American class system – downward as well as upward – mean that less attention is paid to those falling behind than in Europe. Racial progress has been substantial for the more capable members of minorities, but the less capable are stuck in increasingly difficult circumstances. Immigration brings in entrepreneurs, but it also brings in many unskilled workers who compete with native workers for minimum-wage jobs.

Social Problems

The fraying of the safety net for those at the bottom is related both to growing inequality and to conservative politics. The welfare reform begun in the mid-1990s, which have trimmed the rolls beyond most expectations as the economic boom has succeeded beyond most expectations, may yet collapse when the economy turns down. That (nearly inevitable) downturn will simultaneously throw new jobholders out of work and reduce state and local resources to cope with the problems. If the five-year lifetime eligibility for welfare written into the new law ends concurrently for many recipients, the consequences could be catastrophic.

Other problems – violent crime, and the sale and use of illegal drugs, for example – are arguably caused in part by inequality and in part by the frayed net. By the same token, the level of violence may have its origins in some of the same cultural factors that support American entrepreneurship – notably the frontier traditions that encourage individual initiative and put little weight on obedience to authority. Putting those traditions together with political conservatism has led to the incomparably high proportion of Americans in prison.

POLICY...

...for the United States

The deep cultural basis buttressing the United States' growth advantages carries with it two complementary implications. On the one hand, changes approaching European egalitarianism/*dirigisme*, which might slow down American growth, are unlikely to occur. On the other, plausible policy changes designed to buffer the downside are unlikely to be sufficient to endanger growth.

Within these narrow constraints, the United States can look in several directions to reduce the increased inequality and mend the frayed safety net:

Improve education. The scale of the public investment that would be needed to make a real difference would be extremely large. But a large initiative is still worth trying, if only because the alternatives are grim.

Repair the safety net. Even in boom times, America's shameful problems of homelessness and hunger have arguably gotten worse. When the boom ends – perhaps any minute now – matters could get a lot worse fast. Thought ought to be given now about how to cope with a less-than-full-employment economy.

Adjust macroeconomic policy. Because the consequences of even a mild downturn can cause major problems for those at the bottom, the balance between avoiding inflation and encouraging growth ought to be tilted toward the latter.

Rethink tax policy. Inequality compares the top to the bottom. Increasing high-bracket income tax rates is neither politically realistic nor would it be effective in generating

significant revenue. But removing the income limit on the Social Security payroll tax – the most regressive feature of the tax system – and avoiding such inequality-exacerbating moves as the abolition of the estate tax would pay egalitarian dividends.

...for Europe

No one is contemplating policy changes that transform the Continental economy into a replica of America's, but improvement is possible in three areas: further economic integration to enlarge and deregulate markets, de-*dirigisme* and other structural reform, and immigration reform not only to encourage entrepreneurship but also to offset the consequences of a rapidly aging native population.

What is less possible – and less desirable – is thoroughgoing cultural change. Tony Blair's onetime slogan, "Cool Britannia," which suggested that convergence was on the way, has been mercifully forgotten and never was translatable into French or German. The opposite of "Cool Britannia," however, is Venice, a beautiful museum supported entirely by tourism. Europe is still far from that, but rejection of all change could lead that way.

The proper balance is not for this American to dictate.

CONCLUSION

My findings are in a profound sense conservative. If long-run growth is Schumpeterian, and if culture provides the primary basis for the differences between the United States and Europe, then government can do little to effect fundamental change.

Such thinking, though, is no excuse for fatalism. Europe is unlikely to reduce unemployment to the current 4 percent rate in the United States. But when French and other European unemployment was well above 10 percent several years ago, a number of French economists estimated that it could be brought down to the 8 percent realm by monetary and other macroeconomic measures; cutting deeper would require structural change.

A combination of the business cycle and some modest structural and macroeconomic measures has subsequently reduced it to below 10 percent. Extension of the modest decreases in labor-market rigidity and the equally modest steps away from central control, both seen as quite radical within France, could continue the drop.

In the United States, the case for radicalism to buffer the downside of rapid growth is even more clear-cut. Yet, given the huge tides of mandated federal spending on Social Security and Medicare on the one side and defense on the other, there is only a pitifully small amount of discretionary spending that could go to repairing the safety net. Any outlays in social programs are unlikely to affect the machinery of growth, if only because the outlays will be modest, that is, if the business cycle and the political stalemate allow discretionary social spending to grow at all.

The stalemate – a nearly evenly divided government for at least the next two years – may help with the primary desideratum of "Do No Harm," but it is not likely to do much good either. The business cycle on both sides of the Atlantic, however, may present a real challenge to current conservatism. Even if the cyclical downturn on the upside of a Schumpeterian wave proves as mild as we would expect, the tendency of the European left to hunker down in defense of the welfare state while the right fights the shadow of inflation could throw the current slow improvement into gear-crunching reverse. When the next cyclical drop is imposed on the next Schumpeterian down-slope, no kind of conservatism will do, any more than it did in the Great Depression. M